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AUTHOR Jones, Thomas H.

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#### **ABSTRACT**

By the late 1980s, 28 states in the United States had instituted lotteries as a supplemental means of financing public education. This paper presents findings of a study that examined the claim that state lotteries enhance spending for public education. Regression analysis, conducted on data for the year 1987, compared lottery and nonlottery jurisdictions among the 50 states. Four dependent measures -- two indicating support for education and two indicating tax effort for education--were regressed on seven state socioeconomic and demographic variables. Two variables indicated the presence or absence of a state lottery and any earmarking legislation. In 1987, 18 states had adopted policies that established public education as a major recipient of lottery revenue. The findings reaffirm the importance of state wealth, as measured by per capita income, in determining support for education. The claim that lotteries influence state aid or school spending was not supported. When per capita income was controlled, the presence of a lottery did not account for a significant amount of interstate variation in school finance. Wealthy states adopted lotteries in advance of other states; lotteries did not make the states wealthy. Finally, the results show that lotteries indirectly reflect the public's perception of the tax burden. It is recommended that states renounce lottery profits altogether. (LMI)

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### AMERICA'S GAMBLE: LOTTERIES AND THE FINANCE OF EDUCATION

American Educational Studies Association Annual Meeting Chapel Hill, N.C. November 10-13, 1994

> Sharon Wilson for Thomas H. Jones Department of Educational Leadership University of Connecticut Box U - 93 Storrs, CT. 06269-2093

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# AMERICA'S GAMBLE: LOTTERIES AND THE FINANCE OF EDUCATION

By the late 1980s, fiscal crises, tax revolt measures, education reform, and other factors had prompted 28 states to institute lotteries as a supplemental means of public finance. Support of the public schools was the single cause most frequently invoked for legalization.

Here we report on a study that provides a nation-wide empirical test of the claim that lotteries enhance public education spending. (Jones and Amalfitano, 1994). The study is grounded within a political claim of many lottery advocates that the existence of the games leads to increases in educational funding. Opinions for and against this view abound; some empirical research already has been done. It is reasonable to assume that the claim impacts policy (Hancock, 1987; Thomas & Webb, 1984). And in fact political and fiscal policy links between lotteries and education have been established in 22 states and Washington, D.C. (LaFleur, 1988).

The two questions we address in this study are central to the understanding of lotteries' role in school finance.

- 1. To what extent can state lotteries explain variation in support for public education among the states?
- 2. Do states' claims about the *uses* of lottery revenues impact educational finance? That is does earmarking matter?

To be clear, our study posits a *comparison* among the fifty states and asks, "Is school finance enhanced in lottery versus non-lottery jur sdictions?" Lottery advocates have made school financial enhancement claims—in some states for several decades. It seemed reasonable to assume that lottery states will, by now, be financing schools better than non-lottery states for reasons attributable to the lottery, if advocates claims have any validity.



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### **DESIGN**

Economists and public finance specialists have developed well accepted, fairly standard approaches for assessing the impact of state fiscal measures on education spending. This body of literature, referred to as "expenditure determinants studies", explains why states follow particular fiscal patterns. (Bahl, 1969; Dye, 1976; Strudwick 1985). We rely on this approach. We add state lotteries to the "traditional" measures and forms of analysis, considering them as another set of variables potentially helping to explain inter-state differences in school support.

Traditional social, economic and demographic variables were selected to represent educational cost factors, fiscal ability, and the expenditure preference (tastes) of residents in individual states. Indicators of support and spending effort were regressed on the state characteristics. In the regressions we use four specific dependent measures, two indicating "support for education" and two "tax effort for education". Together these four measures indicate support and effort for education.

Lottery variables indicated the presence or absence of a lottery in each state, and any earmarking legislation. Hierarchical regression techniques were used to control for the influence of the significant traditional determinants and facilitated examination of the relative ability of lotteries in explaining interstate variation in each indicator of support and each measure of effort. T-tests were conducted to establish whether or not those states that support schools with lottery revenues simply exhibit higher levels of support or effort.

Our data are from the year 1987, one of the last in which lottery states and non-lottery states had roughly comparable social, economic and demographic characteristics required for a comparative analysis of this type. See Table 1.



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## TABLE 1 A LIST OF MEASURES AND THEIR ABBREVIATIONS

The support measures:

- 1. Per pupil state aid, (SA)
- 2. Per pupil state-local expenditures, (SL)

The effort measures:

- 1. State school aid as part of state government expenditures, (SAEF1)
- 2. state-local school expenditures as a percent of state personal income, (SLEF2)

The lottery measures:

- 1. Presence or absence of a lottery, (L)
- 2. lotteries earmarked for education by state statute, (LOTED)

The socioeconomic and demographic predictor variables:

- 1. Per capita income, (PCI)
- 2. School age population, (SAP)
- 3. Percent of population non-white, (PNWT)
- 4. Urbanization, (URB)
- 5. Private school enrollment, (PVSE)
- 6. Population density, (PSQM)
- 7. Educational attainment of the population (PPHS)

### FINDINGS AND DISCUSSION

In 1987 eighteen states had adopted a policy establishing public education as a major recipient of net lottery revenue. Seven states named schools as the sole recipient of lottery revenue, and five of these had lottery revenues actually exceeding federal funding to the public schools in that year. The other eleven states routed some lottery funds to education through the general fund, or by designating schools as one among several recipients.



Our findings reaffirm the importance of state wealth, as measured by per capita income, in determining support for education. Of the variables considered in the model, state per capita income is by far the most powerful environmental determinant of school support. School age population, percentage nonwhite, urbanization, and adults' school completion rates were also significant in some regressions.

In no equation does lottery status of the states explain a significant amount of variation in support and effort for education. Lottery states did provide higher levels of school support than non-lottery states in 1987. This may provide some solace to lottery proponents; however, the finding is less significant than it appears at first glance. In concert with a claim that lotteries influence state aid or school spending cannot be supported. Lottery states actually used a smaller share their wealth for aducation than non-lottery states. Once per capita income is statistically controlled, the presence of a lottery cannot account for a significant amount of interstate variation in school finances. It is true that statistical controls of the type used in this study always raise methodological issues. However, the analysis shows that it is wealthy states which adopt lotteries in advance of other states, not lotteries which make states wealthy.

It is ironic that lotteries are operated and rationalized to "help" schools in those states where personal income levels are generally higher than the national average, and where tax effort levels are lower. Yet it is often the wealthiest states, with high absolute fiscal burdens, which have turned to lotteries as an alternative means of public finance. By no means do we feel we have fully addressed all the possible explanations for lottery adoption, but of the following we do feel quite sure: Lotteries reflect, in some very rough and indirect sense, the public's perception of the tax burden (Filer, Moak, and Uze,1988; Allen 1991).



### CONCLUSION

The findings of this study indicate that state lottery revenues do not help schools. In this finding we corroborate other studies that use different designs (Hartwig, 1987; Stewart, 1987; Borg and Mason, 1987, 1990; Starke, Honeyman and Wood, 1991). If the fiscal incidence of lottery funds is statistically undetectable, surely funds have no practical effect either.

These findings are not surprising. It is well settled in public finance economics that earmarking funds for particular uses has no effect (Gold, 1990). What is surprising—and to our minds unjustifiable—is that states should rationalize their gambling implementations through appeals to this discredited technique.

Accordingly we propose that in every state where school financial claims have been made, a notification be put on each lottery ticket and terminal. "The State of 'X' has determined that lotteries may not provide improved levels of school funding."

We do not think such a notification would greatly affect sales. But such a notification might affect sales at the margin, just as warning labels on cigarette packs have marginally affected sales. More important, states do have an obligation to tell the truth. After years of misleading statements, ticket buyers and the taxpaying public should know that lotteries' education finance claims are false.

A drawback to the above proposal is that it might indirectly encourage governments to make similar political claims for public services other than education. States could claim that the money goes for health, eldercare or other worthy causes, and in fact some states already do this. Education should not foist its problem onto other public sector activities. This brings us to our second, and preferred policy alternative: States



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should renounce lottery profits altogether. In our book we discuss ways this might be done.

More broadly we view lotteries, and other forms of state sanctioned gaming, as symptomatic of the fiscal problems inherent in the modern welfare state. Governments' programs have grown beyond the willingness of most taxpayers to finance them. Sold to the electorate on the grounds that they will reduce other taxes or provide better services, lotteries do neither. They become one of government's false promises, alienating substantial portions of the citizenry.

Governments are the sponsor, administrator, regulator, and chief financial beneficiary of a major gambling game. We view these multiple roles as an ethical problem with practical consequences. Even under the most optimistic of scenarios, gambling could meet only a tiny fraction of a state's revenue needs. Only through renouncing lottery profits, we feel, can the state reclaim its rightful, legitimate role as regulator of the games.



### NOTE

1. The full study appears in book length form. Jones, T.H. and J.L. Amalfitano, 1994. *America's Gamble: Public School Finance and State Lotteries.* Lancaster, PA: and Technomic Publishing Co., .

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